

Notice of Allowability**Application No.**

10/584,484

Applicant(s)

BRANDER ET AL.

Examiner

ANN LAM

Art Unit

1641

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 6/28/11.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-3, 6, 7, 9-13 and 17-19.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20110911.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Ann Y. Lam/
Primary Examiner, Art Unit 1641

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Werner Sterner on September 12, 2011.

The application has been amended as follows:

In claim 13, lines 3-6, replace "comprising a nanopore substrate having a plurality of nanopores, a substantially planar support layer deposited on said nanopore substrate and having a plurality of nanopores corresponding to said nanopores of said nanopore substrate" with --of claim 1--.

In claim 17, line 1, replace "4" with --1--.

In claim 18, line 1, replace "5" with --1--.

In claim 18, insert a period at the end of the sentence (after "nm").

Election/Restrictions

Claims 1-3, 6-7, 9-12 and 17-19 are directed to an allowable product. Pursuant to the procedures set forth in MPEP § 821.04(B), claim 13, directed to the process of making or using an allowable product, previously withdrawn from consideration as a result of a restriction requirement, is hereby rejoined and fully examined for patentability under 37 CFR 1.104.

Because all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, **the restriction requirement as set forth in the Office action mailed on June 26, 2009 is hereby withdrawn.** In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Allowable Subject Matter

Claims 1-3, 6-7, 9-13 and 17-19 are allowed.

The following is an examiner's statement of reasons for allowance: Applicants' response of June 28, 2011 regarding the newly added limitations is found to be persuasive.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,716,629 (discloses array of holes with membrane covering holes and sandwiched between 2 platens; cells are provided in the holes or on a membrane; biomolecules are immobilized on the array and incubated with a compound.).

U.S. Patent No. 6,785,432 (discloses silicon membrane with pores functionalized with chemical functional groups with attached biomolecule or chemical anchors.)

U.S. Patent No. 6,916,665 (discloses binding sites in pores for capturing molecules as channel blockers.)

U.S. Patent No. 7,060,507 (discloses a bilayer inserted into a nanopore.)

U.S. Patent No. 7,201,836 (discloses patch clamps wherein the length of aperture, or thickness of substrate is 3 nanometers-1000 microns, and the diameter of the aperture is usually 15-20 microns.)

U.S. Pregrant Publication No. 20020127585 (discloses porous membrane over holes, the porous membrane bears proteins and has a pore diameter of .1-.5 microns to filter.)

U.S. Pregrant Publication No. 20020191884 (discloses binding and detecting of target molecules on receptor-containing pore wall.)

U.S. Pregrant Publication No. 20030036204 (discloses a hole of 100 nm wherein a protein moves through the aperture and is collected and analyzed.)

U.S. Pregrant Publication No.20030066749 (discloses 37 nm aperture through silicon nitride membrane.)

U.S. Pregrant Publication No. 20030068639 (discloses an immobilized molecule on an inner wall of pore; light is directed in the pore to detect binding.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANN LAM whose telephone number is (571)272-0822. The examiner can normally be reached on Mon.-Thurs. 9-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Shibuya can be reached on 571-272-0806. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ann Y. Lam/
Primary Examiner, Art Unit 1641